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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/631,149

07/31/2003

Phillip B. Blankenship

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06/29/2007

MOLLY D MCKAY, PC  
3207 E 22ND STREET  
TULSA, OK 74114-1823

EXAMINER

MILLER, DANIEL H

ART UNIT

PAPER NUMBER

1775

MAIL DATE

DELIVERY MODE

06/29/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/631,149	<b>Applicant(s)</b> BLANKENSHIP ET AL.	
	<b>Examiner</b> Daniel Miller	<b>Art Unit</b> 1775	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 June 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s)        is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
       Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
       Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/6/07 has been entered.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 1 recites a "petroleum based asphalt binder". No support for this can be for this limitation in the specification.

***Claim Rejections - 35 USC § 103***

1. Claims 1-2 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maier (UK 1448158)
2. Regarding claim 1, Maier teaches a paved surface having 12% natural sand and bitumen binder (page 1 line 70-75 and page 4 line 5-10).
3. Maier is silent as to the stability and fatigue levels of the pavement and the binder being petroleum based. However, it would have been obvious to one having ordinary skill in the art at the time of the invention to adjust the composition of the aggregate, including choosing from coal or petroleum based binders, in order to optimize the stability and fatigue level of the pavement for the intended application, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).
4. Regarding claim 2, the binder contains asphalt and polyamine (see claim 1). Applicant uses a polyamide (polymer) additive (remarks 6/6/07). Polyamide contains polyamines. Polyamine is a generic class of molecules and Maier does not teach which polyamine is used. Therefore a (polymer) polyamide could be employed. It would have been obvious to optimize the resistance to reflective cracking of the asphalt of Maier through routine experimentation and employing a polyamide (polymer) as the

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polyamines used as additives because it is a common and known polyamine containing molecules.

5. Regarding claim 6, the layer is inherently substantially impermeable because the composition is substantially similar to applicants.

6. Claims 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maier in view of Cramwinckel (U.S. 3,822,556).

7. Maier is silent as to the selection of binder based on climate, or the stability and fatigue levels of the pavement.

8. Cramwinckel teaches asphalt with a bitumen binder that is impermeable to water with a thickness of 2.5 cm (column 1 line 30-35, column 2 line 45-50).

9. Cramwinckel further teaches that the bitumen binder can be prepared from any suitable material (column 2 line 63-68) and can be adapted to the climate conditions (column 3 line 1-4). Regarding claim 6, Cramwinckel further teaches the asphalt is impermeable to water (column 1 line 30-35).

10. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Maier to any binder that would be appropriate for applications under particular climates.

11. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maier in view of Malloy et al (U.S. 6,669,773).

12. Regarding claim 1, Maier teaches a paved surface having 12% natural sand and bitumen binder (page 1 line 70-75 and page 4 line 5-10).

13. Maier is silent as to the aggregate asphalt comprising less than 10% or 5% natural sand.

14. Malloy teaches a synthetic lightweight aggregate (SLA) used as a substitute for sand in paving construction (column 1 line 10-20; column 9 line 10-25). The aggregate has the advantage of being a cheaper recycled material and favored in applications where weight is a concern (column 1 line 26-33 and 48-54).

15. Therefore, since it was known at the time of the invention to use a light weight aggregate as a replacement for all or some of the sand in an asphalt pavement application it would have been obvious to one of ordinary skill in the art to replace all or some of the sand for cheaper and lower density material such as light weight aggregate.

### ***Response to Arguments***

16. Applicant's arguments filed 9/22/2006 have been fully considered but they are not persuasive.

17. The 102 rejections over Maier have been withdrawn.

18. Applicant has failed to show that the art of record (Maier) does not possess the properties as claimed by applicant.

19. Applicant's claim includes less than 15% natural sand and asphalt binder, which is consistent with the prior art of Maier. Applicant has not offered any substantive reasoning as to why Maier would not possess similar characteristics as it meets all structural limitations set forth in the claim.

20. Applicant asserts that the binder of Maier is coal based and that the binder of applicant's invention is petroleum based and therefore chemically and structurally different.

21. However, the examiner can find no teaching in Maier that discloses the binder is coal based and has nothing to base this conclusion on other than attorney argument. Further, there appears no support in the instant specification for the asphalt binder being petroleum based (see 112 rejection above).

22. The arguments of counsel cannot take the place of evidence in the record. In re Schulze, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965); In re Geisler, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997) ("An assertion of what seems to follow from common experience is just attorney argument and not the kind of factual evidence that is required to rebut a prima facie case of obviousness."). See MPEP § 716.01(c) for examples of attorney statements which are not evidence and which must be supported by an appropriate affidavit or declaration

23. Then applicant argues that the instant invention contains "essentially no" additives like that of Maier claim 1 (see remarks 6/6/07 page 4). This argument is non commensurate in scope with applicants claimed invention. Applicant claims his aggregate in claim 1 as "comprising" various constituents. This is open-ended language,

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which would allow for the addition of other additives. Applicant has added no further negative limitations.

24. Regarding claim 2, the binder contains asphalt and polyamine (see claim 1). Applicant uses a polyamide (polymer) additive (remarks 6/6/07). Polyamide contains polyamines. Polyamine is a generic class of molecules and Maier does not teach which polyamine is used. Therefore, a (polymer) polyamide could be employed. It would have been obvious to optimize the resistance to reflective cracking of the asphalt of Maier through routine experimentation and employing a polyamide (polymer) as the polyamines used as additives because it is a common and known polyamine containing molecules.

25. Applicant argues there is no motivation to combine the references of Maier in view of Cramwinckel.

26. Regarding the 103 rejection in view of Cramwinckel (U.S. 3,822,556), the motivation to combine is found in the teaching that it is known to choose binders based upon the various climate conditions in outdoor aggregates, such as asphalts.

27. Applicant admits that the Cramwinckel reference would look to "road building material" for application to his liner (page 6 remarks 6/6/07). Therefore, it would have been obvious to combine the teachings of Maier in view of Cramwinckel since both are asphalts, in contact with the earth, and exposed to outside elements (see abstract Cramwinckel and Malloy generally).

28. Regarding the 103 rejection in view of Malloy et al (U.S. 6,669,773), Malloy teaches a synthetic lightweight aggregate (SLA) used as a substitute for sand in paving



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construction (column 1 line 10-20; column 9 line 10-25). The aggregate has the advantage of being a cheaper recycled material and favored in applications where weight is a concern (column 1 line 26-33 and 48-54).

29. Therefore, since it was known at the time of the invention to use a light weight aggregate as a replacement for all or some of the sand in an asphalt pavement application it would have been obvious to one of ordinary skill in the art to replace all or some of the sand for cheaper and lower density material such as light weight aggregate.

30. Applicants argument regarding the definition of aggregate and affidavit have been carefully considered, but they are considered irrelevant and do not prevent a finding of obvious as above.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Miller whose telephone number is (571) 272-1534. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on (571) 272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Daniel Miller



JENNIFER C. MCNEIL  
SUPERVISORY PATENT EXAMINER  
6/25/7